DEPARTMENT OF LABOR

Mine Safety and Health Administration

30 CFR Parts 56 and 57

RIN 1219–AA84

Safety Standards for Explosives at Metal and Nonmetal Mines

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Proposed rule.

SUMMARY: This proposed rule would revise certain provisions of the Mine Safety and Health Administration's (MSHA) safety standards for explosives at metal and nonmetal mines. The proposal would revise the standards for use of a ''laminated partition'' as it relates to requirements for powder chests and the separation of transported explosive material. The proposal would also revise existing provisions related to loading and firing of explosive materials, and establish new requirements when loading is interrupted or firing of explosive materials is delayed. The proposal also clarifies the application of existing provisions concerning the protection of explosive materials from impact and exposure to high temperatures. In addition, the proposal would revise and clarify the existing provisions addressing static electricity dissipation during loading. The Agency's intent concerning requirements for vehicles containing explosive material is clarified, with no proposed regulatory change.

DATES: All comments, information and requests for a public hearing must be submitted by March 6, 1995.

ADDRESSES: Send written comments to Patricia W. Silvey, Director, Office of Standards, Regulations and Variances, MSHA, Room 631, Ballston Tower No. 3, 4015 Wilson Boulevard, Arlington, Virginia 22203. Interested persons are encouraged to send comments on a computer disk along with their original comments in hard copy.

FOR FURTHER INFORMATION CONTACT: Patricia W. Silvey, Director, Office of Standards, Regulations and Variances, MSHA, (703) 235–1910.

SUPPLEMENTARY INFORMATION:

I. Paperwork Reduction Act

This proposed rule contains no information collection or paperwork requirements subject to the Paperwork Reduction Act of 1980.

II. Rulemaking Background

MSHA published comprehensive revisions to its explosives safety standards for metal and nonmetal mines in January 1991 (56 FR 2070). Prior to the effective date of the rule, MSHA stayed several provisions due to compliance issues raised by the mining community and explosives manufacturers. The provisions involved were subsequently reproposed on October 16, 1992, (57 FR 47524) for revision and clarification. On December 30, 1993, (58 FR 69596), MSHA published the final rule which became effective on January 31, 1994.

In February 1994, the American Mining Congress (AMC) and the Institute of Makers of Explosives (IME) each filed a petition for review of the final rule with the United States Court of Appeals for the District of Columbia Circuit, in *American Mining Congress, et al.* v. *MSHA*, Docket No. 94–1146, and in *IME* v. *MSHA*, Docket No. 94–1144. AMC requested that MSHA reconsider evidence in the rulemaking record regarding the ''continuous loading'' requirements of §§ 56/57.6306(c), Loading and blasting. In addition, AMC requested that the Agency clarify the preamble discussion to §§ 56/57.6202(a)(1), concerning vehicles containing explosive materials.

IME argued for revision of §§ 56/57.6000, the definition of ''laminated partition,'' and corresponding changes in §§ 56/57.6133(b), Powder chests, and §§ 56/57.6201 (a)(2) and (b)(2), Separation of transported explosive material. Also, IME requested that MSHA reconsider information in the rulemaking record regarding the requirements of §§ 56/57.6602, Static electricity dissipation during loading.

MSHA is conducting this rulemaking pursuant to section 101 of the Federal Mine Safety and Health Act of 1977 (Mine Act).

III. Discussion and Summary of the Proposed Rule

A. General Discussion

Historically, hazards associated with the storage, transportation, and use of explosive materials have been a cause of serious injuries and fatalities in metal and nonmetal mines. Precautions to safeguard against these hazards are an essential part of any effective mine safety program.

This proposal addresses issues raised in the rule challenges noted above. The proposal also addresses issues based upon MSHA's experience and establishes new requirements for blast site security when loading is interrupted or firing is delayed. In addition, the proposal would revise the scope of the existing requirements for protecting explosive material from impact and high temperatures, clarifying MSHA's original intent.

B. Section-by-Section Analysis

The following analysis examines the proposed rule and its effect on existing standards.

Definitions

Sections 56/57.6000 definition of laminated partition. The existing definition of ''laminated partition'' in 30 CFR 56/57.6000 describes the composition of partitions that may be used to separate detonators from other explosive materials and specifically states that the IME–22 container or compartment meets the criteria of a ''laminated partition.'' This definition and the nominal dimensions of the partition's requirements were derived from IME's Safety Library Publication No. 22, ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' 1985. The IME has informed MSHA that use of the term ''laminated partition'' as defined by MSHA, under the provisions of §§ 56/57.6133 and 56/57.6201, raises safety concerns. Specifically, the IME stated that the IME–22 compartment or container should not be used as a ''laminated partition'' when certain detonators are transported with explosives or blasting agents in the same vehicle or stored together in powder chests because such use is contrary to IME's recommendations.

The use of a ''laminated partition'' to separate certain detonators from explosives or blasting agents when transported or stored together in powder chests is an accepted practice with a good safety record in the mining industry. It is, therefore, MSHA's intention to continue to recognize this practice. At the same time, MSHA acknowledges that the limitations for use of such compartments or containers must be followed to protect miners from the hazards of an unplanned ignition.

MSHA, therefore, proposes to revise the existing definition of ''laminated partition.'' The proposed definition will specify the construction requirements for a ''laminated partition'' as described in the IME Safety Library Publication No. 22 (May 1993) and the Generic Loading Guide for the IME–22 Container (October 1993). The definition would also recognize alternative construction requirements specified in these publications.

In addition, MSHA proposes to revise the existing requirements for Powder chests, §§ 56/57.6133, and Separation of transported explosive material, §§ 56/57.6201, to incorporate by reference the

IME Safety Library Publication No. 22, ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' (May 1993) and the ''Generic Loading Guide for the IME–22 Container,'' (October 1993). With these revisions, using a ''laminated partition'' to separate certain detonators from explosives or blasting agents would continue to be permitted, provided the limitations set by IME for use of a ''laminated partition'' are followed. These IME publications would be available at MSHA headquarters in Arlington, VA and at all Metal and Nonmetal Mine Safety and Health District Offices. In the future, MSHA will consider modifying these incorporations to reflect substantive updates of the publications.

Storage

Sections 56/57.6133 Powder chests. Existing §§ 56/57.6133, concerning powder chests, provide for the storage of detonators with other explosive materials. Specifically, existing paragraph (b) requires that detonators be kept in separate chests from explosives or blasting agents, except that detonators and explosives may be kept in the same compartment or container if separated by 4 inches of hardwood, laminated partition, or equivalent.

Since the early 1970's, MSHA has required 4 inches of hardwood or equivalent to separate detonators from explosives or blasting agents when stored together. The purpose of the 4 inches of hardwood is to provide sufficient separation of explosive materials from detonators to protect against propagation should detonators be initiated by outside forces.

The proposal will also continue to allow the use of other construction materials that are equivalent to 4 inches of hardwood. This equivalent material must provide at least the same protection as the 4 inches of hardwood as demonstrated by testing.

As discussed above under the definition of ''laminated partition,'' the proposal would permit a compartment or container meeting the definition of a ''laminated partition'' to be used to separate certain detonators from explosives or blasting agents. When a ''laminated partition'' is used, the proposal would require the provisions of IME Safety Library Publication No. 22, ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' (May 1993), and the ''Generic Loading Guide for the IME–22 Container,'' (October 1993) to be followed. These IME publications would be incorporated by reference and are available at MSHA headquarters in Arlington, VA and at all Metal and Nonmetal Mine Safety and Health District Offices. In the future, MSHA will consider modifying these incorporations to reflect substantive updates of the publications.

Transportation

Sections 56/57.6201 Separation of transported explosive material. Existing §§ 56/57.6201 contain requirements for transporting detonators with other explosive material. Specifically, paragraphs (a)(2) and (b)(2) provide for detonators to be separated from explosives or blasting agents by 4 inches of hardwood, laminated partition or equivalent.

As discussed above, since the early 1970's, MSHA has required 4 inches of hardwood or equivalent to separate detonators from explosives or blasting agents when transported together in the same vehicle. The purpose of the 4 inches of hardwood is to provide sufficient separation of explosive materials from detonators to protect against propagation should detonators be initiated by outside forces, such as impact.

Likewise, the proposal will continue to allow the use of other construction materials that are equivalent to 4 inches of hardwood. This equivalent material must provide at least the same protection as the 4 inches of hardwood as demonstrated by testing.

As discussed above under the definition of ''laminated partition,'' the proposal would permit a compartment or container meeting the definition of a ''laminated partition'' to be used to separate certain detonators from explosives or blasting agents. When a ''laminated partition'' is used, the proposal would require the provisions of IME Safety Library Publication No. 22 ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' (May 1993) and the ''Generic Loading Guide for the IME–22 Container,'' (October 1993) to be followed. These IME publications would be incorporated by reference and are available at MSHA headquarters in Arlington, VA and at all Metal and Nonmetal Mine Safety and Health District Offices.

Sections 56/57.6202 Vehicles. The 1993 preamble discussion to §§ 56/57.6202(a)(1) led to some misunderstanding in the mining community that vehicles used on mine property must be able to pass Federal, State, and local licensing requirements for over-the-road use to be in compliance with MSHA regulatory provisions. This was not a requirement included in the regulation, nor the Agency's intent.

On September 30, 1994, MSHA issued Program Policy Letter No. P94–IV–3, clarifying the meaning of the term ''good condition.'' MSHA's use of the term ''good condition'' is intended to mean that the mine vehicle must be in a condition consistent with safe operating practices. A vehicle that is road worthy can generally be expected to be in good condition. MSHA does not intend for the term ''good condition'' to mean that mine vehicles must pass Federal, State and local licensing requirements for over-the-road use. Vehicles carrying explosive materials must comply with the requirements of subpart M of §§ 56/57.14000 et seq. Subpart M—Machinery and Equipment, addresses the maintenance requirements for all self-propelled mobile equipment used on mine property.

Use

Sections 56/57.6302 Separation of explosive material and Sections 56/57.6905 Separation of explosive material and hang-up blasting. Paragraph (a) of existing §§ 56/57.6302 requires that explosives and blasting agents be kept separate from detonators until loading begins. This provision remains unchanged. The section heading of §§ 56/57.6302 would be revised to read ''Separation of explosive material.''

Existing paragraph (b) requires that explosive material be protected from impact and temperatures in excess of 150 °F when taken to the blast site. As discussed below, experience in the application of this standard has led MSHA to propose that these two paragraphs be separated and clarified.

In 1993, MSHA promulgated §§ 56/57.6302 under the ''Use'' portion of the explosives regulations, thereby creating confusion as to whether explosives must be protected from impact during transportation and storage as well. MSHA's intent was to require protection of explosive material from impact and high temperatures generally, not just during use. The proposal would move existing paragraph (b) of §§ 56/57.6302 to ''General Requirements'' and ''General Requirements—Surface and Underground''. For surface mines, the provision would be codified as § 56.6905, with the section heading ''Explosive material protection.'' For underground mines, the provision would be codified as § 57.6905, with the section heading ''Separation of explosive material and hang-up blasting.''

It is well recognized that exposure of explosive material to impact or high temperatures can be hazardous. From 1977 to 1988, as reported in MSHA's Program Circular (PC–7026) on ''Blasting Incidents in Mining,'' (August 1988), there were at least 22 impact- and temperature-related blasting incidents, six of which resulted in fatalities. Therefore, MSHA is proposing that paragraphs (a) and (b) of §§ 56.6905 and 57.6905 require protection against temperatures in excess of 150 °F and impact with the exception of tamping and dropping during loading. When tamping and dropping explosive materials during loading, operators must comply with existing §§ 56/57.6304, Primer protection.

Proposed paragraph (c) of § 57.6905 is derived from the general requirement in § 57.6302 that explosives be protected from impact. It would require the use of detonating cord to initiate explosives placed in raises, chutes, and ore passes to free hang-ups. Freeing hang-ups is inherently hazardous because it potentially exposes both explosives and miners to unsupported material. Detonators could be hit by falling material and prematurely detonate.

Virtually all detonators used in mining contain highly sensitive primary explosive compositions which make them impact sensitive. Detonators, whether electric or nonelectric, are the most impact sensitive of commercially used explosive products. Detonating cord is not highly impact sensitive so long as the outer covering material remains intact.

MSHA has reviewed the available literature on freeing hang-ups and surveyed its field offices and found that a variety of procedures are used. Hang-ups are commonly freed by placing charges of explosives in contact with, or as near as possible to, the blockage, often with poles. Some mine operators use detonating cord to initiate the charges while others use detonators. MSHA believes that the use of detonating cord to initiate the explosives allows for complete control of the firing time and provides greater safety for the miners involved.

The proposal would not preclude the use of such devices as ballistic disks which are initiated by a detonating cord.

Sections 56/57.6306 Loading, blasting, and security. The proposal would revise existing §§ 56/57.6306, which address loading and blasting precautions. In addition, the proposal would add provisions to ensure that the blast site is secure from unauthorized entry when loading is interrupted or firing is delayed. It would replace the security provisions of §§ 56/57.6313.

Existing paragraphs (a) and (b) would be redesignated as paragraphs (b) and (c) without change and a new paragraph (a) would be added. Existing paragraph (d) would be redesignated as (e). Existing paragraphs (c) and (e) would be revised and combined with the provisions of existing §§ 56/57.6313 as proposed paragraph (d). No changes are proposed to existing paragraphs (f) and (g).

When explosive materials or initiating systems are brought to the blast site, proposed paragraph (a) would require that the area be barricaded and posted, or flagged against unauthorized entry. MSHA intends that this new requirement would prevent unauthorized or inadvertent entry by persons onto the blast site. The proposal would ensure that the blast site is clearly demarcated so that all persons are aware of the perimeter of the blast site. This precaution would protect against the risk of unplanned detonations and possible subsequent misfires caused by unauthorized persons, including trespassers, disturbing the blast site. Trespassing is a continuing, recognized problem on mine property. Although explosives were not involved, MSHA records show that there have been four deaths of trespassers on mine property to date in 1994.

Proposed paragraph (d)(1) of §§ 56/57.6306 revises provisions in existing paragraphs (c) and (e) which require loading to be continuous and the blast to be fired without undue delay. This paragraph also replaces §§ 56/57.6313 by addressing blast site security when loading is interrupted or firing is delayed.

The proposal would require that loading and firing of a blast be conducted without undue interruption or delay. This requirement reflects the longstanding and generally accepted safety practice that loading and firing be completed as soon as practicable after the process begins. The Agency recognizes that there are circumstances which cause an interruption of loading or a delay in firing. Examples of these circumstances include emergencies, unfavorable atmospheric conditions, shift changes, and large equipment failure.

When loading is interrupted or firing is delayed for any reason, the proposal would require the mine to be ''attended'' to prevent unauthorized entry to the blast site. ''Attended'' is defined in §§ 56/57.6000. MSHA believes that requiring the mine be attended when loading is interrupted or firing is delayed provides the protection needed to miners. Entry by unauthorized persons on a blast site where explosive materials are present can present hazards to those persons and to miners. For example, a person may throw lighted smoking materials into a blast hole, disturb the initiation system, or kick material into a hole—any one of which could contribute to a premature detonation. Even if premature detonation does not occur, these incidents could later expose miners to the hazards associated with misfires. Further, trespassers could remove explosive materials from a loaded hole which would constitute a violation of Bureau of Alcohol, Tobacco and Firearms (BATF) security regulations. MSHA enforces security regulations on mine property under a Memorandum of Understanding with BATF (45 FR 25564). Requiring the mine to be attended would provide a reasonable measure of protection against these risks.

MSHA believes that the proposed requirement is practicable for the mining industry because interruptions are rare and when they do occur work schedules and the availability of mine personnel generally could be adapted to satisfy the proposed requirement. For example, many large mines are operated continuously with personnel routinely on site around the clock, seven days a week. In some cases, these operations load a series of blast holes sequentially before firing. At small operations working one shift a day, specific arrangements may have to be made for the mine to be attended when an interruption in loading or delay in firing of explosives results in a delay beyond the end of the shift. It is MSHA's experience, however, that small operations ordinarily load and fire explosives during a single work shift. The presence and routine activities of these persons on site could be sufficient to prevent unauthorized entry to the blast site.

With regard to underground blasting, the proposal would require that the mine be attended when loading is interrupted or firing of explosives is delayed. However, the proposal would recognize that underground areas of a mine are secure against unauthorized entry if entrance to the mine is through vertical shafts. Slope and adit mines are secure if surface entries are locked to prevent access by unauthorized persons.

When underground blast sites are not secure against unauthorized entry, however, the proposed rule would require a person to be present at the mine to prevent unauthorized entry to the blast site when loading is interrupted or firing of explosives is delayed. Agency experience indicates that maintenance and other personnel

are often present during off-shifts and weekends at underground mines. The presence of these persons could satisfy the requirements of the proposal, provided they prevent unauthorized entry to the blast site when loading is interrupted or firing is delayed.

Paragraph (d)(2) would require persons securing a blast site at a surface mine or at blast site at the surface area of an underground mine to withdraw from the blast site during the approach and progress of an electrical storm. Persons securing an underground blast site involving an electrical blasting operation that is capable of being initiated by lightning also would be required to withdraw from the blast site to a safe location. These storm precautions correspond with those required under existing §§ 56/57.6604.

The proposed rule would delete the provision in existing paragraph (e) of §§ 56/57.6306 which require MSHA to be notified if loaded holes are not fired within 72 hours. MSHA believes that the proposed requirements that loading and firing be done without undue interruption or delay, and the provisions for blast site security in the event of an interruption or delay in loading and firing, provide greater protection than the existing 72-hour notification requirement.

Sections 56/57.6313 Blast site security. Under the proposal, the security provisions of §§ 56/57.6313 would be revised and incorporated into §§ 56/57.6306 to afford blast site protection when loading is interrupted or when firing is delayed.

Extraneous Electricity

Sections 56/57.6602 Static electricity dissipation during loading. Existing §§ 56/57.6602 address the build-up of static electricity during pneumatic loading or dropping of explosive material into a blasthole. Following publication of the December 30, 1993, safety standards for explosives, MSHA received technical information indicating that the scope of this provision is too broad because the term ''dropping'' encompasses dropping, pouring, or auguring explosive materials into blastholes. Specifically, it was noted that dropping, pouring, and auguring explosives are performed at a low velocity. As a result the generation of static electricity is not sufficient to initiate the primer.

Based on this information, MSHA agrees and, therefore, proposes to delete ''dropping'' from the introductory text of §§ 56/57.6602. As revised, the standard would require that when explosive material is loaded pneumatically into a blasthole in a manner that generates static electricity, certain precautions be taken as specified in the regulation.

IV. Executive Order 12866 and the Regulatory Flexibility Act

Executive Order 12866 requires that regulatory agencies assess both the costs and benefits of proposed regulations. MSHA has determined that this rulemaking is not a significant regulatory action and, therefore, has not prepared a separate analysis of costs and benefits. The Regulatory Flexibility Act requires regulatory agencies to consider a rule's impact on small entities. This proposed rule would not have a significant economic impact on a substantial number of small entities. The analysis contained in this preamble meets MSHA's responsibilities under Executive Order 12866 and the Regulatory Flexibility Act.

Based on an analysis of the impact of the proposed rule, MSHA estimates that the total annual recurring cost impact would be about $70,000. All of these costs are attributable to paragraph (d)(1) of §§ 56/57.6306 which requires that if loading is interrupted or firing of the blast is delayed for any reason, the mine must be attended to prevent unauthorized entry to the blast site. The total cost impact on all small mines, those employing fewer than 20 miners, would be nominal.

MSHA anticipates that the revisions to §§ 56/57.6306 would affect all quarries, medium-sized underground mines, and most open pit mines, except for certain operations which mine commodities such as clays and phosphates and do not use explosives. MSHA does not expect small underground mines to be affected as these mines would experience a delay in firing or an interruption in loading only rarely, if ever. Neither does MSHA anticipate that the largest underground mines would be more than nominally affected as many of these mines are operated around the clock, seven days a week. The presence of these persons could satisfy the requirements of the proposal if they are assigned to prevent unauthorized entry to the blast site.

MSHA recognizes that it is a common industry practice to load continuously and to fire explosives promptly. Interruptions in loading and delays in firing, however, can occur infrequently, almost always due to emergency circumstances. In most of these instances, the mine operator would have personnel available on the mine site who could prevent unauthorized entry to the blast site. On occasion, however, circumstances may require the assignment of additional personnel or the payment of additional wages to perform this duty.

Based on these assumptions and its experience, MSHA estimates that the revisions to §§ 56/57.6306 would affect 0.5 percent of the small open pit mines and quarries, 5 percent of the medium underground mines, and 5 percent of the medium and large open pit mines and quarries. MSHA estimates further that an overnight interruption or delay would occur once every 2 years at the smallest mines and up to once every other month at the largest mines. An interruption in loading or a delay in firing that extends over a weekend would occur about once a year at about 5 percent of the medium underground mines and the medium and large open pit mines and quarries.

MSHA estimated that § 57.6905(c) would affect fewer than 60 underground mines which have ore passes, raises, or chutes as an integral part of their mining method. Some of these already may use detonating cord to eliminate ''hang-ups.'' Depending upon how the detonating cord is used, for example, frequency of use, etc., MSHA believes that the proposed requirement may result in increased compliance costs. However, these cost increases are expected to be negligible.

List of Subjects in 30 CFR Parts 56 and 57

Explosives, Incorporation by reference, Metal and nonmetal mining, Mine safety and health.

Dated: December 24, 1994.

J. Davitt McAteer,

Assistant Secretary for Mine Safety and Health.

It is proposed to amend parts 56 and 57, subchapter N, chapter I, title 30 of the Code of Federal Regulations as follows:

PART 56—[AMENDED]

1. The authority citation for part 56 continues to read as follows:

Authority: 30 U.S.C. 811, 956, and 961.

2. Section 56.6000 is amended by revising the definition of ''laminated partition'' to read as follows:

§ 56.6000 Definitions.

* * * * *

Laminated partition. A partition composed of the following material and minimum nominal dimensions: ½-inch-thick plywood, ½-inch-thick gypsum wallboard, ⅛-inch-thick low carbon steel, and ¼-inch-thick plywood, bonded together in that order. Alternative construction materials described in the IME Safety Library

Publication No. 22, ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' (May 1993), and the ''Generic Loading Guide for the IME–22 Container,'' (October 1993) may be used. These publications are incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203, and at all Metal and Nonmetal Mine Safety and Health District Offices.

* * * * *

3. Section 56.6133 is amended by revising paragraph (b) to read as follows:

§ 56.6133 Powder chests.

* * * * *

(b) Detonators shall be kept in separate chests from explosives or blasting agents, unless separated by 4 inches of hardwood or equivalent. A compartment or container meeting the definition of a laminated partition may be used to separate detonators from explosives or blasting agents. When a laminated partition is used, the provisions of the IME Safety Library Publication No. 22, ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' (May 1993), and the ''Generic Loading Guide for the IME–22 Container,'' (October 1993) shall be followed. These publications are incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203 and at all Metal and Nonmetal Mine Safety and Health District Offices.

4. Section 56.6201 is amended by revising paragraphs (a)(2) and (b)(2) to read as follows:

§ 56.6201 Separation of transported explosive material.

* * * * *

(a) * * *

(2) Separated from explosives or blasting agents by 4 inches of hardwood or equivalent. The hardwood or equivalent shall be fastened to the vehicle or conveyance. A compartment or container meeting the definition of a laminated partition may be used to separate detonators from explosives or blasting agents. When a laminated partition is used, the provisions of the IME Safety Library Publication No. 22 (May 1993) and the Generic Loading Guide for the IME–22 Container (October 1993) shall be followed. These publications are incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203 and at all Metal and Nonmetal Mine Safety and Health District Offices.

(b) * * *

(2) Separated from explosives or blasting agents by 4 inches of hardwood or equivalent. The hardwood or equivalent shall be fastened to the vehicle or conveyance. A compartment or container meeting the definition of a laminated partition may be used to separate detonators from explosives or blasting agents. When a laminated partition is used, the provisions of IME Safety Library Publication No. 22 (May 1993) and the Generic Loading Guide for the IME–22 Container (October 1993) shall be followed. These publications are incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203 and at all Metal and Nonmetal Mine Safety and Health District Offices.

5. Section 56.6302 is revised to read as follows:

§ 56.6302 Separation of explosive material.

Explosives and blasting agents shall be kept separated from detonators until loading begins.

6. Section 56.6306 is revised to read as follows:

§ 56.6306 Loading, blasting, and security.

(a) When explosive materials or initiating systems are brought to the blast site, the area shall be barricaded and posted, or flagged against unauthorized entry.

(b) Vehicles and equipment shall not be driven over explosive material or initiating systems in a manner which could contact the material or system, or create other hazards.

(c) Once loading begins, the only activities permitted within the blast site shall be those activities directly related to the blasting operation and the activities of surveying, stemming, sampling of geology, and reopening of holes, provided that reasonable care is exercised. Haulage activity is permitted near the base of the highwall being loaded, provided no other haulage access exists.

(d)(1) Loading and firing of a blast shall be performed without undue interruption or delay. If loading is interrupted or firing of the blast is delayed for any reason, the mine shall be attended to prevent unauthorized entry to the blast site.

(2) During the approach and progress of an electrical storm, persons preventing unauthorized entry to a surface blast site shall withdraw from the blast area to a safe location.

(e) In electric blasting prior to connecting to the power source, and in nonelectric blasting prior to attaching an initiating device, all persons shall leave the blast area except persons in a blasting shelter or other location that protects them from concussion (shock wave), flying material, and gases.

(f) Before firing a blast—

(1) Ample warning shall be given to allow all persons to be evacuated;

(2) Clear exit routes shall be provided for persons firing the round; and

(3) All access routes to the blast area shall be guarded or barricaded to prevent the passage of persons or vehicles.

(g) Work shall not be resumed in the blast area until a post-blast examination addressing potential blast-related hazards has been conducted by a person with the ability and experience to perform the examination.

§ 56.6313 [Removed]

7. Section 56.6313 is removed.

8. Section 56.6602 is amended by revising the introductory text to read as follows:

§ 56.6602 Static electricity dissipation during loading.

When explosive material is loaded pneumatically into a blasthole in a manner that generates static electricity—

* * * * *

9. Section 56.6905 is added to read as follows:

§ 56.6905 Explosive material protection.

(a) Explosive material shall be protected from temperatures in excess of 150 °F.

(b) Explosive material shall be protected from impact, except for tamping and dropping during loading.

PART 57—[AMENDED]

10. The authority citation for part 57 continues to read as follows:

Authority: 30 U.S.C. 811, 956, and 961.

11. Section 57.6000 is amended by revising the definition of ''laminated partition'' to read as follows:

§ 57.6000 Definitions.

* * * * *

Laminated partition. A partition composed of the following material and minimum nominal dimensions: ½-inch-thick plywood, ½-inch-thick gypsum wallboard, ⅛-inch-thick low carbon steel, and ¼-inch-thick plywood, bonded together in that order. Alternative construction materials described in the IME Safety Library Publication No. 22, ''Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials,'' (May 1993), and the ''Generic Loading Guide for the IME–22 Container,'' (October 1993) may be used. These publications are

incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203 and at all Metal and Nonmetal Mine Safety and Health District Offices.

* * * * *

12. Section 57.6133 is amended by revising paragraph (b) to read as follows:

§ 57.6133 Powder chests.

* * * * *

(b) Detonators shall be kept in separate chests from explosives or blasting agents, unless separated by 4 inches of hardwood or equivalent. A compartment or container meeting the definition of a laminated partition may be used to separate detonators from explosives or blasting agents. When a laminated partition is used, the provisions of the IME Safety Library Publication No. 22 (May 1993) and the Generic Loading Guide for the IME–22 Container (October 1993) shall be followed. These publications are incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203 and at all Metal and Nonmetal Mine Safety and Health District Offices.

13. Section 57.6201 is amended by revising paragraphs (a)(2) and (b)(2) to read as follows:

§ 57.6201 Separation of transported explosive material.

* * * * *

(a) * * *

(2) Separated from explosives or blasting agents by 4 inches of hardwood or equivalent. The hardwood or equivalent shall be fastened to the vehicle or conveyance. A compartment or container meeting the definition of a laminated partition may be used to separate detonators from explosives or blasting agents. When a laminated partition is used, the provisions of the IME Safety Library Publication No. 22 (May 1993) and the Generic Loading Guide for the IME–22 Container (October 1993) shall be followed. These publications are incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203 and at all Metal and Nonmetal Mine Safety and Health District Offices.

(b) * * *

(2) Separated from explosives or blasting agents by 4 inches of hardwood or equivalent. The hardwood or equivalent shall be fastened to the vehicle or conveyance. A compartment or container meeting the definition of a laminated partition may be used to separate detonators from explosives or blasting agents. When a laminated partition is used, the provisions of IME Safety Library Publication No. 22 (May 1993) and the Generic Loading Guide for the IME–22 Container (October 1993) shall be followed. These publications are incorporated by reference and are available at MSHA, 4015 Wilson Boulevard, Room 728, Arlington, VA 22203 and at all Metal and Nonmetal Mine Safety and Health District Offices.

14. Section 57.6302 is revised to read as follows:

§ 57.6302 Separation of explosive material.

Explosives and blasting agents shall be kept separated from detonators until loading begins.

15. Section 57.6306 is revised to read as follows:

§ 57.6306 Loading, blasting, and security.

(a) When explosive materials or initiating systems are brought to the blast site, the area shall be barricaded and posted, or flagged against unauthorized entry.

(b) Vehicles and equipment shall not be driven over explosive material or initiating systems in a manner which could contact the material or system, or create other hazards.

(c) Once loading begins, the only activities permitted within the blast site shall be those activities directly related to the blasting operation and the activities of surveying, stemming, sampling of geology, and reopening of holes provided that reasonable care is exercised. Haulage activity is permitted near the base of the highwall being loaded, provided no other haulage access exists.

(d)(1) Loading and firing of a blast shall be performed without undue interruption or delay. If loading is interrupted or firing is delayed for any reason, the mine shall be attended to prevent unauthorized entry to the blast site. Underground areas are secure against unauthorized entry if entrance to the mine is through vertical shafts. Inclined shafts or adits are secure when locked at the surface.

(2) During the approach and progress of an electrical storm—

(i) Persons preventing unauthorized entry to a surface blast site shall withdraw from the blast area to a safe location; and

(ii) Persons preventing unauthorized entry to an underground blast site involving an electrical blasting operation that is capable of being initiated by lightning shall withdraw from the blast area to a safe location.

(e) In electric blasting prior to connecting to the power source, and in nonelectric blasting prior to attaching an initiating device, all persons shall leave the blast area except persons in a blasting shelter or other location that protects them from concussion (shock wave), flying material, and gases.

(f) Before firing a blast—

(1) Ample warning shall be given to allow all persons to be evacuated;

(2) Clear exit routes shall be provided for persons firing the round; and

(3) All access routes to the blast area shall be guarded or barricaded to prevent the passage of persons or vehicles.

(g) Work shall not be resumed in the blast area until a post-blast examination addressing potential blast-related hazards has been conducted by a person with the ability and experience to perform the examination.

§ 57.6313 [Removed]

16. Section 57.6313 is removed.

17. Section 57.6602 is amended by revising the introductory text to read as follows:

§ 57.6602 Static electricity dissipation during loading.

When explosive material is loaded pneumatically into a blasthole in a manner that generates static electricity—

* * * * *

18. Section 57.6905 is added to read as follows:

§ 57.6905 Explosive material protection and hang-up blasting.

(a) Explosive material shall be protected from temperatures in excess of 150 °F.

(b) Explosive material shall be protected from impact, except for tamping and dropping during loading.

(c) Only detonating cord shall be used to initiate explosives placed in raises, chutes, and ore passes to free hang-ups.

[FR Doc. 95–16 Filed 1–4–95; 8:45 am]

BILLING CODE 4510–43–P